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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/748,758 | 12/21/2000 | Keith McCloghrie | CISCP548 | 4513 |

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| EXAMINER | |
|---|---|
| BARQADLE, YASIN M | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2153 | |

DATE MAILED: 09/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/748,758 | MCCLOGHRIE ET AL. | |
| | Examiner | Art Unit | |
| | Yasin M. Barqadle | 2153 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *26 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-9 and 11-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 11-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

**Continued Examination Under 37 CFR 1.114**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 26, 2006 has been entered.

**Response to Amendment**

2. The amendment filed on June 26, 2006 has been fully considered but are not persuasive. Claims 1-9 and 11-29 are presented for examination.

**Response to Arguments**

In essence the Applicant argues " that Nguyen et al. and Spofford et al do not show or suggest sending message to an agent specifying objects t include in each notification and the order of the objects. Page 7, paragraph 2, section 2, and page 10, paragraph 3.

Examiner notes that Spofford teaches "after new objects are dynamically added to the MIB 206, a resource manager or management station, such as the management console 110 of the network system 100, sends SNMP requests, such as get, get next or set, to the management module 116 of the network device 102 managing a new device, such as the SUM 132, where the requests are received by an agent, such as the MADC 200 or 220 or other software module, such as one of the upgrade modules 208, a software module 222, the RMON module 230, etc. The request or requests include OIDs to one or more objects to be read or modified as desired. The agent interfaces with the MIB manager 202, which executes the corresponding functions in response to the SNMP requests, such as query, modify, etc. to retrieve or modify the information as desired. For a set operation, the MIB manager 202 retrieves the object values identified by OID from the MIB and provides the information to the agent, which reports back to the management console."

(Spofford, Col. 10, lines 51 to col. 11, line 12). Therefore Spofford clearly teaches sending a request message such as get, get next to an agent. The request includes OIDs to one or more objects to be read or modified as desired. Hence, Spofford specifies what OID and the order. Examiner also notes that the MIB objects are ordered hierarchically. "A MIB is a definition of a structured collection of objects representing one or more resources of the network to be managed. The objects in the MIB are ordered in a hierarchical tree structure, typically defined with the ASN.1 (abstract syntax notation one) standard, which is a formal language for defining abstract syntaxes of application data." Col. 1, lines 25-33.

Furthermore, in Fig. 5A Spofford shows that MIB structures have a specific order. . "FIG. 5C is a diagram of a modified MIB 520, which includes the MIB-II 500 and the RMON MIB 510 added thereto. Thus, the OID for the RMON subtree of the MIB 520 is 1.3.6.1.2.1.16, where RMON elements have the following OIDs: 1.3.6.1.2.1.16.1, 1.3.6.1.2.1.16.2, 1.3.6.1.2.1.16.3, etc. The MIB 520 may define the same upgraded MIB 206 shown in FIG. 2D after the RMON software module 230 is added." (Col. 12, lines 22-35). Therefore, Spofford clearly shows following a sequence and adding branch (16) a specific location.

Applicant also argues that Nguyen et al. and Spofford et al have the draw backs of the conventional systems ... and thus create the problems addressed by Applicant's invention. (page 8, last paragraph). Applicant's invention as claimed and argued teach "sending message to an agent specifying objects that include in each notification and the order of the objects." Examiner has addressed this limitation as explained above.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) *which* forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained **though** the **invention** is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been **obvious** at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9 and 11-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (U.S. Patent Number 6,219,703, hereinafter "Nguyen") in view of Spofford et al. (U.S. Patent Number 5,913,037, hereinafter "Spofford").

In referring to claims 1 and 14, Nguyen shows substantial features of the claimed invention, including:

- Sending a request from the management station to at least one agent for a list of notifications supported by the agent:

*"NMS retrieves ASN.1 types supported by using Get-next over ASN.1 types table. NMS uses this information to construct ASN.1 types supported and object identifier macros. This table also defines entry list for all tables supported by SNMP agent for device"* (Nguyen, Fig. 5, element 510)

- Receiving at the management station the list of notifications supported by an agent;

receiving from the agent a notification containing the objects specified in the message sent from the management station upon occurrence of an event; "NMS retrieves list of standard MIBs supported by using Get-next over the standard MIBs table. Using this information, NMS generates basic structure for the MIB and constructs import statements" (Nguyen, Fig. 5, element 508) and "NMS retrieves list of Traps supported by using Get-next over Traps supported table. This information is used to define Traps that can be generated by the device." (Nguyen, Fig. 5, element 514) A list of notifications supported by an agent (referred to as Traps in SNMP) is inherently implied in an MIB

However, Nguyen does not show sending a message from to the agent specifying objects to include in each of the notifications and the order of the objects. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Nguyen as evidenced by Spofford.

In analogous art, Spofford discloses a dynamic management information base manager. Spofford shows a network device that can change its MIB structure: Spofford, Fig. 4 shows an agent **408** that is responsible for updating the dynamic MIB. The agent adds and deletes MIB objects. Spofford, Fig. 5A-5C shows that MIB structures have a specific order, therefore updating objects within the MIB would necessitate knowledge of the order of the objects (Col.

10, lines 51 to col. 12, line 12 and Col. 12, lines 22-35). Spofford also teaches sending a request message such as get, get next to an agent. The request includes OIDs to one or more objects to be read or modified as desired (Col. 10, lines 51 to col. 11, line 12).

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Nguyen so as to send a message to the agent specifying objects to include in each of the notifications and the order of the objects, such as taught by Spofford, in order to lower bandwidth usage by keeping unwanted messages from being sent.

Spofford further teaches the object contained in the notification received from the agent are in the order specified in the message from the management station (Col. 10, lines 51 to col. 12, line 12 and Col. 12, lines 22-35 and Fig. 5A-5C).

In referring to claim 2, Nguyen in view of Spofford shows,

• Sending a message comprises utilizing a simple network management protocol (SNMP) protocol:

"Preferably the method and apparatus will **utilize** existing SNMP **methods** for communicating between the NMS and the device, so that no additional protocols or connections are required for extracting the MIB information." (Nguyen, col. 1, lines 37-40)

In referring to claim 3, Nguyen in view of Spofford shows,

- Receiving a management information base:

  *"NMS retrieves list of **standard MIBs supported by using Get-next over the standard MIBs table. Using this information, NMS generates basic structure** for **the MIB and** constructs import statements"* (Nguyen, Fig. 5, element 508)

In referring to claim 4,

- Sending a modified management information base:

  *Nguyen, Fig. 5, element 508* (quoted above)

In referring to claim 5,

- Receiving a list of objects associated with each of the notifications:

  ***Nguyen, Fig. 5, element 514*** (quoted above)

A list of objects associated with each of the notifications (referred to as Trap variable bindings in SNMP) is inherently implied in an MIB

In referring to claim 6,

- Adding new objects to the notification:

*Nguyen, col. 1, lines 37-40* (quoted above)

Specifying objects for each of the notifications (referred to as Trap variable bindings in SNMP) is inherently implied in a system that uses SNMP, which inherently implies adding new objects to the notification

In referring to claim 7,

- Reordering the objects in the notification:

*Nguyen, col. 1, lines 37-40* (quoted above)

Specifying objects for each of the notifications (referred to as Trap variable bindings in SNMP) is inherently implied in a system that uses SNMP, which inherently implies reordering the objects in the notification

In referring to claim 8,

- Receiving a list of variable bindings for each of the notifications:

*Nguyen, Fig. 5, element 514* **(quoted above)**

Receiving a list of variable bindings for each of the notifications is inherently implied in a system that receives a MIB

In referring to claim 9,

- Sending a list of variable bindings for each of the notifications:

*Nguyen, col. 1, lines 37-40* (quoted above)

Specifying objects for each of the notifications (referred to as Trap variable bindings in SNMP) is inherently implied in a system that uses SNMP

In referring to claim 11,

- Sending a Get request

*Nguyen, col. 1, lines 37-40* (quoted above)
Sending a Get request is inherently implied in a system that uses SNMP

In referring to claim 12,

- Receiving a Trap message

*Nguyen, col. 1, lines 37-40* (quoted above)

Receiving a Trap message is inherently implied in a system that uses SNMP

In referring to claim 13,

- Receiving an Inform message

*Nguyen, col. 1, lines 37-40* **(quoted** above)

Receiving an Inform message is inherently implied in a system that uses SNMP

In referring to claim 15,

- The computer readable medium is selected from the group consisting of CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, and data signal embodied in a carrier wave:

*"**The communication interface** 302 is **coupled** to a processing system 304 for processing the communications and for controlling the NMS 102. The processing system 304 comprises a **conventional** processor 306 and a conventional memory 308. The memory 308 is programmed with the preloaded MIBs 106 **and** NMS discovery application 108 in accordance with the present invention.* "(Nguyen, col. 3, line 66 — col. 4, line 5)

System memory and hard drives are inherently implied in conventional memory

In referring to claim 16,

- The management station comprises a SNMP manager: The management station of Nguyen is an SNMP manager

In referring to claim 17,

- Requesting information on notifications from the agents:

*Nguyen, Fig. 5, element 508* **(quoted above); *Nguyen, Fig. 5, element 514* (quoted above)** A list of notifications supported by an agent (referred to as Traps in SNMP) is inherently implied in an MIB

In referring to claim 18, Nguyen shows substantial features of the claimed invention, including:

- A processor and a storage medium having the preferred configuration stored thereon: *Nguyen, col. 3, line 66 — col. 4, line* 5 (quoted above)
- Receiving at a management station a list of notifications supported by an agent: *Nguyen, Fig. 5, element 508* (quoted above); ***Nguyen, Fig. 5, element 514*** (quoted above) A list of notifications supported by an agent (referred to as Traps in SNMP) is inherently implied in an MIB

However, Nguyen does not show sending a message to the agent specifying objects to include in each of the notifications and the order of the objects. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Nguyen as evidenced by Spofford.

In analogous art, Spofford discloses a dynamic management information base manager. Spofford shows a network device that can change its MIB structure: Spofford, Fig. 4 shows an agent **408** that is responsible for updating the dynamic MIB. The agent adds and deletes MIB objects. The agent interfaces with the MIB manager 202, which executes the corresponding functions in response to the SNMP requests, such as query, modify, etc. to retrieve or modify the information as desired. For a set operation, the MIB manager 202 retrieves the object values identified by OID from the MIB and provides the information to the agent, which reports back to the management console." (Spofford, Col. 10, lines 51 to col. 11, line 12 and Col. 12, lines 22-35).

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Nguyen so as to send a message to the agent specifying objects to include in each of the notifications and the order of the objects, such as taught by Spofford, in order to lower bandwidth usage by keeping unwanted messages from being sent.

In referring to claim 19, Nguyen shows substantial features of the claimed invention, including:

Means for sending a request from the management station for a list of objects currently contained within notifications supported by the agent: Nguyen, Fig. 5, element 508 (quoted above); Nguyen, Fig. 5, element 514 (quoted above)

A list of notifications supported by an agent (referred to as Traps in SNMP) is inherently implied in an MIB

- Means for receiving information specifying contents of notifications supported by an agent within a network at a management, station:

  *Nguyen, Fig 5, element 508* (quoted above); *Nguyen, Fig. 5, element 514* (quoted above) A list of notifications supported by an agent (referred to as Traps in SNMP) is inherently implied in an MIB

  However, Nguyen does not show sending a message to the agent specifying objects to include in each of the notifications and the order of the objects. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Nguyen as evidenced by Spofford.

  In analogous art, Spofford discloses a dynamic management information base manager. Spofford shows a network device that can change its MIB structure: Spofford, Fig. 4 shows an agent **408** that is responsible for updating the dynamic MIB. The agent adds and deletes MIB objects. (Spofford, Col. 10, lines 51 to col. 11, line 12 and Col. 12, lines 22-35).

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Nguyen so as to send a message to the agent specifying objects to include in each of the notifications and the order of the objects, such as taught by Spofford, in order to lower bandwidth usage by keeping unwanted messages from being sent.

Spofford further teaches the object contained in the notification received from the agent are in the order specified in the message from the management station (Col. 10, lines 51 to col. 12, line 12 and Col. 12, lines 22-35 and Fig. 5A-5C).

In referring to claim 20, Nguyen shows substantial features of the claimed invention, including:

• Receiving at a management station a list of notifications supported by an agent: *Nguyen, Fig. 5, element 508* (quoted above); *Nguyen, Fig. 5, element 514* (quoted above) A list of notifications supported by an agent (referred to as Traps in SNMP) is inherently implied in an MIB

• Modify a list of objects for the notifications to include specified objects in a specified order: *Nguyen, col. 1, lines 37-40* (quoted above)

Specifying objects for each of the notifications (referred to as Trap variable bindings in SNMP) is inherently implied in a system that uses SNMP, which inherently implies modification of the list of objects, the order of the objects will remain the same throughout the network (see also Col. 12, lines 22-35)

However, Nguyen does not show sending a message to the agent specifying objects to include in each of the notifications and the order of the objects. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Nguyen as evidenced by Spofford.

In analogous art, Spofford discloses a dynamic management information base manager. Spofford shows a network device that can change its MIB structure: Spofford, Fig. 4 shows an agent **408** that is responsible for updating the dynamic MIB. The agent adds and deletes MIB objects. It is inherently implied that the objects to be deleted or added are sent to the agent. Spofford, Fig. 5A-5C show that MIB structures have a specific order (see Spofford, Col. 10, lines 51 to col. 11, line 12 and Col. 12, lines 22-35).

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Nguyen so as to send a message to the agent specifying objects to include in each of the notifications and the order of the objects, such as taught by Spofford, in order to lower bandwidth usage by keeping unwanted messages from being sent.

In referring to claim 21,

• Receiving a request from the management station for a list of objects currently contained

within notifications supported by the agent:

*Nguyen, Fig. 5, element 508* (quoted above); *Nguyen, Fig.* ***5, element 514*** **(quoted above)** A list of notifications supported by an agent (referred to as Traps in SNMP) is inherently implied in an MIB

In referring to claim 22,

- Sending a MIB containing a list of the objects currently contained within the notifications supported by the agent:

  *Nguyen, Fig.* ***5,*** *element 508* (quoted above); ***Nguyen,*** *Fig. 5,* ***element 514*** **(quoted above)**

In referring to claim 23, Nguyen shows substantial features of the claimed invention, including:

- A processor and a storage medium having the preferred configuration stored thereon: *Nguyen, col. 3, line 66 — col. 4, line 5* (quoted above)
- Receiving at a management station a list of notifications supported by an agent: *Nguyen, Fig. 5, element 508* (quoted above); ***Nguyen,*** *Fig. 5, element* ***514*** **(quoted above)** A list of notifications supported by an agent (referred to as Traps in SNMP) is inherently implied in an MIB
- Modify a list of objects for the notifications to include specified objects in a specified order:

  *Nguyen, col. 1, lines 37-40* (quoted above)

  Specifying objects for each of the notifications (referred to as Trap variable bindings in SNMP) is inherently implied in a system that uses SNMP, which inherently implies modification of the list of objects, the order of the objects will remain the same throughout the network

However, Nguyen does not show sending a message to the agent specifying objects to include in each of the notifications and the order of the objects. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Nguyen as evidenced by Spofford.

In analogous -art, Spofford discloses a dynamic management information base manager. Spofford shows a network device that can change its MIB structure: Spofford, Fig. 4 shows an agent **408** that is responsible for updating the dynamic MIB. The agent adds and deletes MIB objects. It is inherently implied that the objects to be deleted or added are sent to the agent. Spofford, Fig. 5A-5C show that MIB structures have a specific order, (see Spofford, Col. 10, lines 51 to col. 11, line 12 and Col. 12, lines 22-35).

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Nguyen so as to send a message to the agent specifying objects to include in each of the notifications and the order of the objects, such as taught by Spofford, in order to lower bandwidth usage by keeping unwanted messages from being sent.

In referring to claim 24 and 27, Nguyen shows substantial features of the claimed invention, including:
Where sending a message to the agent comprises sending a management information base containing a modified list of variable bindings (col. 3, lines 36-46 and col. 4 lines 24-62).

In referring to claims 25-26, Nguyen shows list of new variable bindings (col. 3, lines 36-46 and col. 4 lines 24-62. See fig. 5).

In referring to claims 28-29, Spofford hows list of creating a new management information base comprising changing the location of one or more original variable bindings to insert one or more new variable bindings associated with each of the notifiation (Col. 10, lines 51 to col. 12, line 12 and Col. 12, lines 22-35 and Fig. 5A-5C).

***Conclusion***

The prior made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Information regarding the status of an application may be obtained form the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR system. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YB

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